



## **APPLICATIONS**

- · TCP perforating operations
- · Drillstem Testing (DST) operations
- Conducting TCP operations in wells with open perforations
- · Underbalance perforating

## **FEATURES**

- · Packer must be correctly set to achieve initiation
- · Designed to API RP-67 (Oilfield Explosive Safety) guidelines
- · Uses existing Drop Bar and Direct Pressure Firing Head components

## **BENEFITS**

- Provides a complete backup solution in case of misfire of primary system
- Enhanced safety as cannot be detonated at surface or without proper seal from packer

The Dual Top Annulus Differential Pressure Firing Head uses differential pressure across the packer to actuate the firing head. It also allows the option to include the Drop Bar Hydrostatic Firing Head as a redundancy.

The system is run with the Packer Bypass Assembly and uses control lines to transmit annular pressure above the packer down to the differential pressure activated firing head. The actuating piston for the differential firing head is held within a retainer sleeve by precision shear pins. The number of pins used is based on well conditions and desired safety factor.

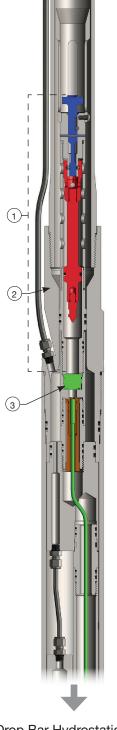
It is ideal for DST operations where underbalanced perforating is desired. Also, wells that have existing perforations in them as no firing head activation pressures can enter the formation causing reservoir damage.

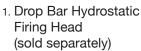
The Drop Bar Hydrostatic Firing Head is sold separately. Please refer to its data sheet for detailed specifications.

## ANNULUS DIFFERENTIAL PRESSURE FIRING HEAD HARDWARE SPECIFICATIONS

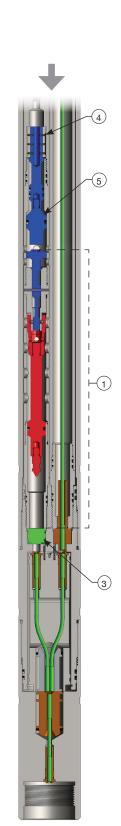
Tubing Size (in)[mm]	2-3/8 [60] EUE 2-7/8 [68] EUE
Assembly Part Number	FHDTAP-3375-000
O.D. (in)[mm]	3.38 [86] for 2-3/8" EUE 3.67 [93] for 2-7/8" EUE
Makeup Length (ft)[m]§	5.29 [1.61]
Max. 100 Hour Temperature Rating (°F)[°C]†	400 [204]
Min. Required Hydrostatic (psi)[MPa]	200 [1.4]
Min. Required Pinning Pressure (psi)[MPa]	950 [7]
Max. Operating Pressure (psi)[MPa] <sup>‡</sup>	20,000 [138]
Precision Shear Pins - 475psi/pin [3.3MPa/pin]	SPIN-0100-250
Max. Tension (lbf)[kN]	120,000 [534]
Top Sub Part Number	FHDTAP-3375-238B (2-3/8" EUE) FHDTAP-3375-288B (2-7/8" EUE)
Redress Kit Part Number	FHDTAP-3375-000-KIT

 $<sup>^{\</sup>star\star}$  Use "HT" for high temperature operations (above 325°F (163°C))





- 2. Top Sub
- 3. Percussion Initiator
- 4. Precision Shear Pins
- 5. Differential Actuating Piston



<sup>†</sup> Hardware only. Viton O-rings need to be used above 325°F (163°C)

<sup>&</sup>lt;sup>‡</sup> Backup O-rings required above 13,000psi (90MPa). Kit FHDTAP-3375-000-BUKIT needs to be ordered separately

<sup>§</sup> Including top sub